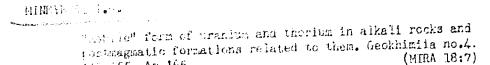
MINEYEVA, I.G.; TARKHANOVA, G.A.

Behavior of uranium and thorium in the postmagnetic process of a complex of potassium alkali rocks. Gool. rud. mestorozh. 6 no.4: 3-14 Jl-Ag '64. (MIRA 17:10)

443-455 Ap 165.



RABOTHOVA, I.L.; MINEYEVA, L.A.

Study of the lag phase in micro-organisms. Report No.1: Influence of external conditions on the duration of the lag phase in Torulopsis utilis and Pseudomonas fluorescens. Mikrobiologiia 28 no.3:352-357 (MIRA 13:3)

1. Biologo-pochvennyy fakulitet Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.

(CRYPTOCOCCUS, culture
Torulopsis utilis, eff. of external cond. on length

of lag phase (Rms))
(PSHUDOMONAS, culture
fluorescens, eff. of external cond. on length of
lag phase (Rms))

RABOTHOVA, I.L.; ZAYTSEVA, G.N.; MINEYEVA, L.A.

Study of the lag-phase in micro-organisms. Report No.2: Changes in cells of Torula utilis and Pseudomonas fluorescens during the lag phase. Mikrobiologiia 28 no.4:481-487 Jl-Ag 159. (MIRA 12:12)

1. Biologo-pochvennyy fakulitet Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.
(CRYPTOCOCCUS)
(PSEUDOMONAS)

RABOTNOVA, I.L.; ZAYTSEVA, G.N.; MINEYEVA, L.A.

Study of the lag phase in micro-organisms. Report No.3: Changes in the cells of Azotobacter grown on molecular and ammonia nitrogen.

Mikrobiologiia 28 no.5:683-689 S-0 *59. (MIRA 13:2)

1. Kafedra mikrobiologii i kafedra biokhimii rasteniy Moskovskogo gosudarstvennogo universiteta im M.V. Lomonosova.

(AZOTOBACTER culture)

MINEYEVA

38044

27.1110

Mineeva, L. A.

S/220/62/031/001/001/003

1018/1218

Title:

Author:

THE EFFECT OF REDOX POTENTIAL OF THE MEDIUM ON GROWTH OF

Periodical:

Mikrobiologiya, v. 31, no. 1, 1962, 43-48

Text: For the review on the effect of redox potential on growth and metabolism of microorganisms, see the monograph of Rabotnova "On the role of physico-chemical conditions (pH and rH₂) cin the ativity of microorganisms", published by AN SSSR, 1957. In the present communication pure cultures of Chlorella vulgaris and Scenedesmus obliquus were used. Growth media are described. The cultures were illuminated during the entire growth period. Variations in redox potential were achieved by blowing appropriate gaseous mixtures through the medium or by adding reducing substances into the latter (thioglycollate, Na₂S₂O₃, Na₂S₂O₄ and Na₂SO₃). Redox potential was determined by means of a platinum electrode. Growth was measured with the aid of a nephelometer. The growth of illuminated photosynthesizing cultures was not accompanied by a drop in rH2. During growth, alkalinization of the medium was noted, this being due to the utilization of nitrate nitrogen and CO₂ for photosynthesis. The slight decrease in Eh observed during the first three-four days (by 100-150 mvolts) was compensated by a marked increase in pH. Growth of algae under heterotrophic conditions (of

Card 1/2

THE EFFECT OF REDOX....

S/220/62/031/001/001/003 I018/I218

nutrition) was accompanied by a slight drop in pH and Eh of the medium. The decrease in Eh was not due to a release of reducing substances into the medium, the latter were determined by the reduction if tiphenyl tetrazolium chloride to formazan in alkaline medium. The effect of reducing substances added to the medium was also studied. It has been shown that a decrease in rH₂ of the medium from 30 to 21 was without any effect on the growth rate of both the autotrophic and heterotrophic cultures. This was taken as an indication that the metabolism of algae is not affected by external medium, because of permeability barriers of the organisms. There are 2 figures and 3 tables.

4

Association:

Biologo-pochvennyi fakul'tet Moskovskogo gosudarstvennogo universiteta im. M. V. Lomono-

sova (Department of Soil Biology, Moscow State University im. M. V. Lomonosov).

Submitted:

February 15, 1961

Card 2/2

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134420002-4

39210

S/220/62/031/002/003/004

1018/1218

AUTHOR:

17 1155

Mineyeva, L. A.

اهد معده

TITLE:

The effect of pH on autotrophic and heterophic nutrition of Chlorella vulgaris and

Scenedesmus obliquus

Mikrobiologiya, v. 31, no. 2, 1962, 233-240 PERIODICAL:

TEXT: Chlorella vulgaris and Scenedesmus obliquus were grown in a medium of the following composition: MgSO₅,7H₂O, 0.9 g; KNO₃, 1.2 g; KH₂PO₄, 0.4 g; Fe(citrate), 0.027 g; ZnSO₄, 0.1 mg; H₃BO₃, 0.1 mg; MnSO₄. 4H₂O, 1.5 mg; CuSO₄.5H₂O, traces, excess CO₂ and water 1000.0 ml. Growth of algae in the mineral medium (autotrophic nutrition) was possible from pH 4.5 to 10.0. In the presence of glucose (heterotrophic nutrition in the dark) Chlorella could grow at a pH from 5 to 9 and Scenedesmus, from pH 5.5 to 7.5. In the presence of acetate as a carbon source, Chlorella grew at pH from 6.3 to 6.4 and Scenedsmus, at pH 7.0 and higher. It was also shown that the pH of the medium affects the character of nutrition of Chlorella and Scenedesmus. In illuminated cultures in the presence of glucose or acetate in the medium, the higher the pH the more autotrophic the nutrition of Scenedesmus obliquus. The same was true of Chlorella vulgaris in the presence of acetate. In the presence of glucose (as a carbon source) the metabolic pattern of Chlorella did not change within pH range from 5.3 to 9.3. There are 6 figures and 5 tables.

Card 1/2

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134420002-4

The effect of ... ASSOCIATION: Biologo-pochvennyy fakul'tet Moskovsko, w gosudarstvennogo universiteta im. M. V Esologo-pochvennyy takut tet Moskovsko, w gosudarstvennogo universiteta im. M. v Lomonosova (Department of Soil Biology, N.o. cow State University, im. M. v. Lomonosov) SUBMITTED: Card 2/2

CIA-RDP86-00513R001134420002-4" APPROVED FOR RELEASE: 06/14/2000

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134420002-4 SIZZU162 | 031 | 003 | 001 | 003 EFFECT OF LIGHT INTENSITY ON THE AUTOTROPHIC AND HETEROTROPHIC

ON THE AUTOTROPHIC AND HETEROTROPHIC 1016|1216 EFFECT OF LIGHT INTENSITY ON THE AUTOTROPHIC AND HETEROTRI NUTRITION OF CHLORELLA VULGARIS AND SCENEDESMUS OBLIQUUS The effect of light on growth and metabolic activity of photosynthesis and b) in the region of light saturation The effect of light on growth and metabolic activity of Chlorella and Scenedesmus was studied activity of Chlorella and Scenedesmus was studied of light saturation of photosynthesis and b) in the region of light saturation of photosynthesis and b) in the region of light saturation of photosynthesis. The ratio between autotrophic and heterotrophic nutrition under the different conditions in two intensity ranges: a) below light saturation of photosynthesis. The ratio between autotrophic and heterotrophic nutrition under the different conditions. in two intensity ranges: a) below light saturation of photosynthesis and b) in the region of light saturation under the different conditions under the different condition under the living mass.

If two intensity ranges: a) below light saturation of photosynthesis and heterotrophic nutrition under the living mass of the living mass.

The ratio between autotrophic and heterotrophic compounds per unit increase of the living mass of photosynthesis. The ratio between autotrophic of organic compounds per unit increase of the living mass. of photosynthesis. The ratio between autotrophic and heterotrophic nutrition under the different conditions and heterotrophic nutrition under the different conditions mass.

The ratio between autotrophic and heterotrophic nutrition under the different conditions and heterotrophic nutrition under the different conditions.

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The ratio between autotrophic and heterotrophic nutrition under the different conditions.

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In the dark 1/3 of the organic compounds used is transformed into cellular material. 27.1110 The greater the part of photosynthesis in the synthesis compounds used is transformed into shift takes place the medium is spent. In the dark 1/3 of the organic compounds by photosynthesis. The shift takes place the medium is spent. In the dark 1/3 of the organic compounds used is transformed by photosynthesis. The shift takes place the medium is spent. In the dark 1/3 of the organic compounds used is transformed by photosynthesis. The shift takes place the medium is spent. In the dark 1/3 of the organic compounds used is transformed by photosynthesis. The shift takes place the less organic substrate from the greater the less organic substrate from the synthesis of cellular substance the less organic substrate from the less organic substrate from the less organic substrate from the less organic substance the less organic substrate from the less organic substance the less o the medium is spent. In the dark 1/3 of the organic compounds used is transformed into cellular material.

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The shift takes place organic compounds used is transformed into cellular material.

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The shift takes place organic compounds used is transformed into cellular material.

The shift takes place organic compounds used is transformed into cel Author: In the light this metabolism is augmented by assimilation of carbon by photosynthesis. The shift takes place Very the ratio between the light this metabolism is augmented by assimilation of carbon by photosynthesis, the ratio between Very sassimilation of carbon by photosynthesis. At higher intensities Very the light candles. At higher intensities wide range of light intensities within a wide range of light intensities—below 500-700 light candles. Within a wide range of light intensities the region of low light intensities—below 500-700 light candles. At higher intensities within a wide range of light intensities the region of low light intensities feeding remains constant within a wide range of light intensities. in the region of low light intensities—below 500-700 light candles. At higher intensities, the fatio between yery 500-700 light candles. At higher intensities of light intensities of light intensities of light intensities of light candles of light li Tille: the autotrophic and heterotrophic feeding remains constant within a glucose consumption by cultures of light intensities of light intensities of light intensities (50-100 light candles) had a specific effect on glucose consumption by cultures of glucose consumption by cultures of glucose consumption by cultures of light intensities (50-100 light candles) had a specific effect on glucose consumption by cultures of glucose consumption Periodical: Card 1/2 OR RELEAS

EFFECT OF LIGHT....

S/220/62/031/003/001/003 I016/I216

Scenedesmus, which could not be attributed to photosynthesis. It is suggested that light affects the rate of the heterotrophic processes by increasing the permeability of the cell. There are 2 figures and 4 tables

Association: Biologo-podwennyy fakul'tet Moskovskogo gosudarstvennogo universiteta im M. V. Lom-

onosova (The Faculty of Soil Biology, The Moscow State University im M V. Lomonosov).

Submitted: June 30, 1961

K

Card 2/2

SKOBKIN, V.S.; MINEYEVA. L.A.

Mutation induction in the bacteriophere T2 following radioactive decay of C14 atoms incorporated into DNA. Genetika no.3:97-104 S 165. (MTR4 18:12)

1. Institut atomnoy energii imeni I.V. Kurchatova, Moskva. Submitted March 30, 1965.

MINEYEVA, L.V.

BELOZERSKIY, A.N.; ZAYTSEVA, G.N.; GAVRILOVA, L.P.; MINEYEVA, L.V.

Chemistry of Azotobacter. Report No.1: Nitrogenous substances in Azotobacter [with summery in English]. Mikrobiologiis 26 no.4: 409-417 J1-Ag '57. (MIRA 10:12)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova
Biologo-pochevnnyy fakul'tet.
(AZOTOBACTER, METABOLISM,
nitrogen (Rus))
(MITROGEN, metabolism,
Azotobacter (Rus))

MINEYEVA, M.N.

Forecasting the phasic state of precipitation near the earth's surface. Trudy TSIPno.83:28-38 '59. (MIRA 12:5) (Precipitation (Meteorology))

MINEYEVA. M.N., LUZHNAYA, N.P.

Accuracy of temperature forecasts for Moscow. Trudy TSIP no.95:32-61 *60.

(Moscow-Atmospheric temperature)
(Weather forecasting)

MINEYEVA, M.N.

Geopotential forecasting in the centers of high cyclones and anticyclones by the wind field with an account of the acceleration. Trudy TSIP no.112:32-39 '61. (Meteorology)

MINEYEVA, Nadezhda Ivanovna; MATSUK, R.V., red.; VORONINA, R.K., tekhn. red.

[Loan capital, credit and currency circulation of capitalist countries] Ssudnyi kapital, kredit, denezhnoe obrashchenie kapitalisticheskikh stran. Moskva, Vysshaia shkola, 1962. 62 p.

(MIRA 15:6)

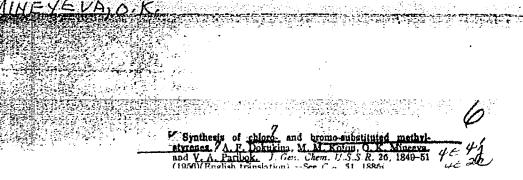
MINEYEVA, O.K.

DOKUKINA, A.F.; KOTON, M.M.; MINEYEVA, O.K.; PARIBOK, V.A.

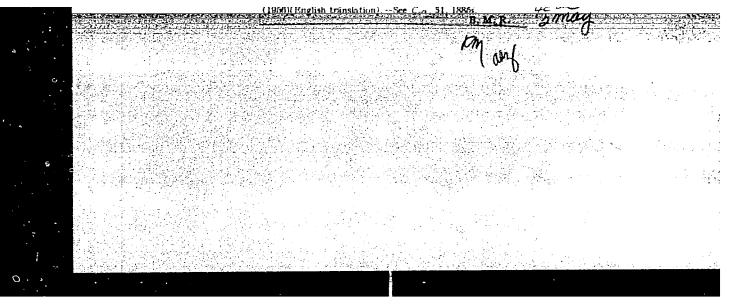
Synthesis of chloro- and brome-substituted methylstyrenes. Zhur.ob. khim. 26 no.6:1651-1653 Je '56. (MIRA 11:1)

1.Leningradskiy politekhnicheskiy institut. (Chemistry, Organic--Synthesis) (Styrene)

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134420002-4



"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134420002-4



MINEYEVA, O.K.

USSR/ Chemistry - Physical chemistry

Card 1/2 Pub. 147 - 23/35

Authors : Dokukina, A. F.; Koton, M. M.; Kryukova, K. N.; Hineyeva, O. K.;

Paribok, V. A.

Title Relation between structure and polymerizability of substituted styrenes

Periodical | Zhur. fiz. khim. 30/1, 190-195, Jan 1956

Abstract : Investigation was conducted to determine the polymerization process of

numerous disubstituted styrene derivatives containing halogen atoms and methyl radicals in various arrangements in the benzene ring of styrene. The position 2,5— at which the maximum rate of polymerization and maximum molecular weight was observed was considered to be the most favorable

position for substitutes in the styrene benzene ring. The series formed

Institution: Leningrad Polytechnic Inst. im. M. M. Kalinin

Submitted: June 27, 1955

Card 2/2 Pub. 147 - 23/35

Periodical: Zhur. fiz. khim. 30/1, 190-195, Jan 1956

by styrene substitutes are shown in the order of their polymerization rate. The effect of substituting groups in the benzene ring of styrene on the polymerizability and other characteristics of polymers is discussed. Four USSR/USA references (1939-1955). Tables; graphs; drawing. Abstract

YEL'TSOVA, P.A.; KOTON, M.M.; MINEYEVA, O.K.; SURNINA, O.K.

Polymerization of vinyl derivatives of biphenyl, diphenyl ether and phenyl sulfide. Vysokom. soed. 1 no.9:1369-1373 S 159.

(MIRA 13:3)

(Biphenyl) (Phenyl ether) (Phenyl sulfide)

5.3400

78284

SOV/79-30-3-38/69

AUTHORS:

Yel'tsova, P. A., Koton, M. M., Mineyeva, O. K.,

Surnina, O. K.

TITLE:

Synthesis of Vinyl Derivatives of Biphenyl, Biphenyl

Ether and Biphenyl Sulfide

PERIODICAL:

Zhurnal obshchey khimii, 1960, Vol 30, Nr 3, pp 933-

934 (USSR)

ABSTRACT:

The effect of substituents phenyl, phenoxy, and phenyl-

mercapto) on the capacity of compounds to underdo

polymerization, and on properties of resulting polymers was studied. Addition of ethylene oxide to biphenyl and

diphenyl ether in the presence of anhydrous aluminum chloride, with subsequent dehydrogenation of obtained carbinols, yields o-vinylbiphenyl (yield 47%), bp 112-113 (0.5 mm), $n_{\rm D}^{20}$ 1.6190; p-vinylbiphenyl, bp 124-126°

(2 mm), mp $118-119^{\circ}$; o-vinyldiphenyl ether (yield 70%), mp $38-39^{\circ}$; p-vinyldiphenyl ether, bp 106° (1 mm), n_{D}^{20}

Card 1/2

Synthesis of Vinyl Derivatives of Biphenyl, Biphenyl Ether and Biphenyl Sulfide

78284 \$0V/79-30-3-38/69

1.6014; p-vinyldiphenyl sulfide (yield 56%), bp 137° (1 mm), n20 1.6495. There are 8 references, 5 U.S. 2 French, 1 German. The U.S. references are: Frank, R., Adams, C., J. Am. Chem. Soc., 68, 1365 (1946); Chem. Abst., 47, 7826 (1953); Bradsher, Ch., Wert, R., J. Am. Chem. Soc., 62, 2806 (1940); Huber, F., Renoll, M., Possow, A., Mowry, D., J. Am. Chem. Soc., 68, 1109 (1946); Mowry, D., Renoll, M., Huber, F., J. Am. Chem. Soc., 68, 1105 (1946).

SUBMITTED:

April 28, 1959

Card 2/2

TARANTAYEV, T.M.; TOKAR', S.Kh.; KUVSHINNIKOV, S.M.; ZUBOVA, Ye.Kh.; MINEYEVA, R.G.; ONISHCHENKO, G.P.

Seroprophylaxis of Botkin's disease. Zhur.mikrobiol.,epid.i immun. 30 no.11:11-15 N '59. (MIRA 13:3)

l. Iz Kirgizskogo instituta epidemiologii, mikrobiologii i gigiyeny i kafedry organizatsii zdravookhraneniya Kirgizskogo meditsinskogo instituta.

(HEPATITIS, INFECTIOUS prev. & control) (GAMMA GLOBULIN ther.)

MINEYEVA, R.K., kand. veter. nauk

Pathomorphology and some problems of the pathogenesis of paratyphoid fever in swine. Uch.zap. KVI 85:154-166°62. (MIRA 16:7)

1. Kafedra patolegicheskoy anatomii Kazanskogo veterinarnogo instituta.

(PARATYPHOID FEVER) (SWINE—DISEASES AND PESTS)

S/058/61/000/010/035/100 A001/A101

24,7900

AUTHORS:

Kopvillem, U.Kh., Mineyeva, R.M., Morozova, I.D.

TITLE:

On the theory of the width of the paramagnetic resonance line in

corundum with admixture of chromium

PERIODICAL:

Referativnyy zhurnal. Fizika, no. 10, 1961, 159, abstract 10V327 (V sb. "Paramagnitn. rezonans", Kazan', Kazansk. un-t, 1960, 92-94)

TEXT: The authors derived a formula for calculating the width of electronic paramagnetic resonance line in magnetic-diluted crystals, due to the presence of dislocations and inner stresses. It is assumed that the spin Hamiltonian of paramagnetic ions contains two parts: the main part is the same for all ions and it determines the spectrum of electronic paramagnetic resonance; the second part characterizes the straggling of constants of the spin Hamiltonian due to straggling of symmetry axes of the crystalline field and it determines the observed width of electronic paramagnetic resonance line. Particular calculations are performed for Cr ions in the lattice of corundum. A comparison of the calculated and experimental data shows that the strong anisotropy of the line width in dependence on direction of the statical magnetic field is explained by

Card 1/2

On the theory of the width ...

S/058/61/000/010/035/100 A001/A101

the contribution from the straggling of symmetry axes of the crystalline field. Contributions to the line width due to interaction of Cr ions between themselves and with Al nuclei are also calculated.



U. Kopvillem

[Abstracter's note: Complete translation]

Card 2/2

YEVDOSHENKO, V.Sh.; MINEYEVA, R.M.; MASHKEVICH, A.A.; CHIKHALOVA, V.S.

Preliminary results of mass immunization of the population of Kirghizistan with "live" poliomyelitis vaccine. Sov. zdrav. Kir. no.1:38-43 Ja-F '62. (MIRA 15:4)

5/126/62/013/005/002/031 E052/E514

Kopvillem, U.Kh. and Mineyeva, R.M.

AUTHORS:

Free nuclear induction in the absence of a magnetic

TITLE:

PERIODICAL: Fixika metallov i metallovedeniye, v.13, no.5, 1962, The method of steady state magnetic ani ultrasonic

Energy of resonance absorption by the enin eveter of the bish cases of resonance absorption by the enin eveter of the bish cases. Spectroscopy, and involves the determination of the high-frequency of resonance absorption by the spin system of the high-frequency of resonance absorption field suffers from the disadvantage magnetic and ultrasonic field suffers from the disadvantage. or resonance absorption by the spin system of the high-frequency magnetic and ultrasonic field, suffers from the disadvantage that the absorption spectrum depends on combinations of the spinthe absorption spectrum depends on combinations of the spinthe ausurption spectrum depends on complications of the split system parameters in a complicated fashion and provides no system parameters in a complicated fashion and provides no The present paper is information on short-lived excited states. The present paper in information on short-lived excited states. The present paper in the present paper in the present paper in this method the spin concerned with the possible application of this method the spin magnetic and ultragonic spectroscopy. TEXT: magnetic and ultrasonic spectroscopy.

System is brought into an excited state during an interval of the system. magnetic and ultrasonic spectroscopy. In this method the spin-system is brought into an excited state during an interval of time which is sufficiently sport to that the magnetic particles do not system is prought into an excited state during an interval of time which is sufficiently short so that the magnetic particles do not succeed in interval of their confidence of their conf succeed in interacting with each other and their environment. generator is then switched off and the average values of the generator is then switched off and the average values of the quantities characterizing the substance are measured, e.g. the Card 1/2 Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134420002-4

Free nuclear induction in the ... S/126/62/013/005/002/031 E032/E514

components of the magnetic or electric quadrupole moments of the spin system. A particular feature of the pulse method is that it may be possible to neglect the effect of internal interactions on the experimental results. The only limitation is the requirement that the Hamiltonian representing the interaction of the spinsystem with the generator should take the form of a sum of singleparticle operators for the magnetic particles. A theoretical analysis of the magnetic and acoustic excitation of a spin-system in the absence of a constant magnetic field is given and an expression is obtained for the expectation value of the operator Q which was introduced by the authors in a previous paper

. (ZhETF, 1961). An estimate is made of cross effects which appear as a result of the action of two-pulse magneto-acoustic

ASSOCIATION: Kazanskiy gosudarstvennyy universitet imeni

V. I. Ul'yanova-Lenina (Kazan' State University imeni V. I. Ul'yanov-Lenia)

SUBMITTED: July 6, 1961

Card 2/2

EPF(c)/EWT(1)/EWP(q)/EWT(m)/BDS--AFFTC/ASD/ESD-3--PT-L 8/0181/63/005/005/1403 L 10530-63 ACCESSION NR: AP3000621 AUTHOR: Mineyeva, R. M. TITIE: Magnetic resonance on simple electron levels of V3+ ions incorporated into the corundum/lattice SOURCE: Fisika tverdogo tela, v. 5, no. 5, 1963, 1403-1405 TOPIC TAGS: electron paramagnetic resonance, V3+ion electron level ABSTRACT: A theoretical study has been carried out concerning the spectrum, intensities, and line widths of transitions between superfine sublevels of the lower nondegenerate energy level of the V3+ ion in the corundum lattice. A spin Hamiltonian is set up and solved for the case in which the constant magnetic field is parallel to the trigonal axis of the crystal. Transition probabilities are calculated, and an expression is derived for the second moment, which consists of two parts: dipole-dipole interactions among particles at the lower level, and dipole-dipole interactions between particles at the lower level and particles at the upper level. It is shown that the chief determinant of line width is the second moment, and, correspondingly, the line width of the transition between superfine sublevels of the lower electron level is the same for all transitions,

L 10530-63
ACCESSION NR: AP3000621

decreasing exponentially with temperature. Evaluation of line width shows that the spectrum can be observed at temperatures of about IK. "In conclusion the author expresses deep thanks to S. A. Al'tehuler for the suggested topic, the continuous interest in the work, and for the discussion of the results." Orig. art. has: 6 formulas.

ASSOCIATION: Kazanskiy gosudarstvenny*y universitet im. V. I. UI'yanova-Lenina (Kazan State University)

SUBHITTED: 09Jan63 DATE ACQ: 11Jun63 ENCL: 00

SUB CODE: PH NO REF SOV: 002 OTHER: 002

L 10019-63 EPF(c)/EWA(k)/EWP(k)/BDS/EWT(1)/3W2/EEC(b)-2/ES(t)-2-AFFTC/ ASD/ESD-3/RADC/AFGC/AFWL/SSD--Pr-4/Pf-4/P1-4/Po-4-GG/E/WG/EH/JHB ACCESSION NR: AP3001293 S/0181/63/005/006/1697/1699

AUTHOR: Al'tshuler, S. A.; Mineyeva, R. M.

88

TITLE: Broadening of paramagnetic resonance lines as a result of indirect exchange interaction

SOURCE: Fizika tverdogo tela, v. 5, no. 6, 1963, 1697-1699

TOPIC TAGS: paramagnetic resonance, spin-lattice relaxation, ionic crystals, chromium ions in ruby

ABSTRACT: A hypothesis of Al'tshuler (ZhETF, 43, 2318, 1962) on the mechanism of paramagnetic resonance in magnetically diluted crystals is supported and developed by comparing available experimental data on chromium ions in ruby with results of detailed calculations by the moment method. The findings confirm that it is the indirect exchange interaction between paramagnetic particles which plays the dominant role in ionic crystals both in the mechanism of spin-lattice relaxation and in the broadening of resonance lines. The effects of crystal-field splitting are discussed, and

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L 10019-63

ACCESSION NR: AP3001293

it is shown that, contrary to suggestions of other authors, neither dipole interactions nor lattice defects can fully account for the line widths observed. Orig. art. has: 8 formulas.

ASSOCIATION: Kazan'skiy gosudarstvenny*y universitet im. V. I. Ul'yanova-Lenina (Kazan' State University)

SUBMITTED: 13Feb63

DATE ACQ: 01Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 005

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134420002-4"

14948

24 6500

S/048/63/027/001/031/043 B125/B102

AUTHORS:

Kopvillem, U. Kh., and Mineyeva, R. M.

TITLE:

On methods pulsed magnetic and sonic spectroscopy

PERIODICAL:

Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 27, no. 1, 1963, 93 - 95

TEXT: The possibilities of the pulse method of magnetic and sound spectroscopy are brought out by the example of a spin system excited by a high-frequency sound pulse without constant magnetic field. These calculations are made to establish a connection between the mean value $\mu_{\chi}(x=x, y, z)$ of the magnetic moment of the specimen for the time interval $\Delta t \ll t$ (bis the shortest characteristic magnetic relaxation time) and the parameters A_1 , B_1 ,

 $\Delta t \text{ of the Hamiltonian } \mathcal{H}_{BL} = \sum_{i=1}^{N} [A_i (S_x^i S_x^i + S_x^i S_x^i) \cos \omega_{st} + B_1 (S_x^i S_y^i + S_y^i S_x^i) \sin \omega_{gt}],$

of the interaction between the sound field and the spin system. Experimental measurements of $\langle M \rangle$ in the instant Δ t=t permit the investigation of the spin-phonon interaction in crystals. The solution of the Schrödinger Card 1/3

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134420002-4"

Or methods pu	lsed magnetic and sonic	S/048/63/027/001/031/043 B125/B102			
ASSOCIATION:	Fiziko-tekhnicheskiy institut Kaza SSSR (Physicotechnical Institute of Academy of Sciences USSR); Kazansk Ul'yaneva-Lenina (Kazan' State Uni Lenin)	of the Kazan' Branch of the kiy gos. universitet im. V. I.			
Card 3/3	* i	n k			

AL TSHULER, S.A.; MINEYEVA, R.M.

k.

Broadening of paramagnetic resonance lines due to indirect exchange interaction. Fig. tver. tela 5 no.6:1697-1699

[MIRA 16:7]

1. Kazanskiy gosudarstvennyy universitet imeni Ul'yanova-Lenina.

L 24761-65 EWT(1)/EPF(c)/EPF(n)-2/EPR/T/EPA(bb)-2/EWA(1) Pr-4/Ps-4/Pu-4 WW

ACCESSION NR: AP5003464

\$/0181/65/007/001/0310/031

AUTHORS: Al'tshuler, S. A.; Mineyeva, R. M.

TITLE: Concerning <u>nuclear magnetic resonance</u> in nuclei belonging to paramagnetic atoms

SOURCE: Fizika tverdogo tela, v. 7, no. 1, 1965, 310-312

TOPIC TAGS: paramagnetic atom, nuclear magnetic resonance, line broadening, hyperfine structure

ABSTRACT: In view of the difficulties in observing nuclear magnetic resonance (NMR) in paramagnetic atoms, owing to the large linewidth, the author indicates another possibility of observing NMR in paramagnetic atoms under experimental conditions that are easily realized. The method is based on the fact that the crystalline field very frequently gives rise to doublets in ions of rare-earth metals, and the lower level of the doublet usually corresponds to

Card

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L 24761-65

ACCESSION NR: AP5003464

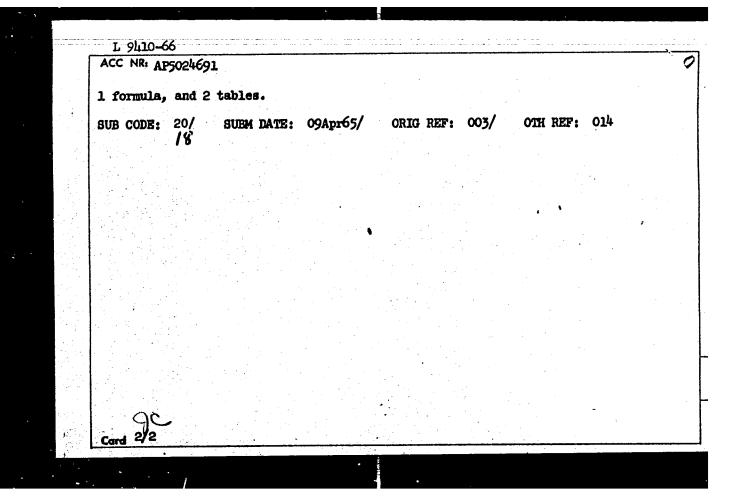
a large g factor. At a temperature 1--2K and a magnetic field close to 1000 Oe the splitting of such a doublet is so large that the population of the lower sublevel is larger than the population of the upper one by approximately 105. This eliminates the broadening due to the dipole-dipole interaction of the electron magnetic moments. This also makes possible the use of crystals with large paramagneticion concentration, so that the intensity of the NMR effect can be increased and the number of defects causing line broadening is decreased. Since the local field is quite large (about 30 kOe for Thir ethyl sulfate), the effect can be observed in relatively weak external fields. Orig. art. has: I formula.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina (Kazan' State University)

SUBMITTED: 10Aug64 ENCL: 00 SUB CODE:

NR REF SOV:

ENT(1)/ENT(m)/ENP(1)/T/ENP(t)/ENP(b)/ENA(c) IJP(c) JD/NN/JG/GG/RML 9410-66 ACC NR: AP5024691 SOURCE CODE: UR/0056/65/049/003/0743/0746 44, 53 441,50 AUTHOR: Bershov, L. V.; Marfunin, A. S.; Mineyeva, R. M. ORG: Institute of Geology of Ore Deposits, Petrography, Mineralogy and Geochemistry of the Academy of Sciences SSSR (Institut geologii rudnykh mestorzhdeniy, petrografii, mineralogii i geokhimii Akademii nauk SSSR) TITLE: Electron paramagnetic resonance of the tetrahedral complex [MnF4]2 scheelite SOURCE: Zhurnal eksperimental noy i teoreticheskoy fiziki, v. 49, no. 3, 1965, 743-746 21, 411, 9 5 TOPIC TAGS: electron paramagnetic resonance, manganese compound, single crystal, hyperfine structure, crystal symmetry ABSTRACT: The authors have observed in a single crystal of natural/scheelite two different Mn2+ spectra, which are naturally attributed to Ca and W sites. One of these spectra has the characteristic signature of a super-hyperfine structure from four F19 nuclei. The coordination of Mn2+ in the second spectrum is definitely tetrahedral. Both spectra (which overlap partially) have tetragonal symmetry with common Z axis. This makes it possible to obtain the constants of the spin Hamiltonian for Mn2+ in W sites, indicating a new charge compensation mechanism in scheelite. In addition, this is at present the only compound in which EPR spectra of Mn2+ with fluorine ligans in tetrahedral coordination are observed. Orig. art. has: 2 figures, Card 1/2



BERSHOV, L.V.; MARFUNIN, A.S.; MINEYEVA, R.M.

Electronic paramagnetic resonance of Mg²+ in anophyllite. Dokl. AN SSSR 164 no.5:1141-1142 0 165. (MIRA 18:10)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR. Submitted April 9, 1965.

1. 05622-67 EWT(1)/EEC(k)-2/T/EWP(k) IJP(c) WG/RTW

ACC NR: AP6024492 SOURCE CODE: UR/0181/66/008/007/2222/222

AUTHOR: Mineyeva, R. M.

ORG: Institute of Geology of Mineral Deposits, Petrography, Mineralogy, and Geochemistry. AN SSSR. Moscow (Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR)

TITLE: Spin lattice relaxation and resonant absorption of ultrasound in crystals containing paramagnetic ions with singlet electron level

SOURCE: Fisika tverdogo tela, v. 8, no. 7, 1966, 2222-2227

TOPIC TAGS: spin lattice relaxation, resonance absorption, ultrasound absorption, paramagnetic ion, absorption coefficient, spin phonon interaction

ABSTRACT: This is a continuation of earlier work (FTT v. 5, 1403, 1963), where the theory of the line width of the transition between nuclear sublevels of the ground-state electron singlet was developed. The present article deals with the spin-lattice relaxation times for these transitions. To this end, general formulas are derived for the probabilities of the relaxation transitions and for the coefficient of ultrasound absorption at low temperatures. The formulas derived are then used to obtain numerical estimates for V⁵:Al₂O₃ and Tm⁵⁺:Tm(C₂H₃SO₄)₃·9H₂O. The values obtained are of the order of 2 and of 10⁵ - 10¹² sec respectively (the corresponding temperatures are 1.5 and 4.2 and 2K respectively). The effect of spin-phonon interaction on the acoustic paramagnetic resonance is also investigated, and the coefficient of resonant

Cord 1/2

absorpt	absorption of ultrasound is found to be of the order of 10 ⁻⁹ cm ⁻¹ at frequency 6 x 1 sec ⁻¹ , in the case of the V ³⁺ ion, and of the order of 10 ⁻¹⁹ w ² cm ⁻¹ for Tm ³⁺ at 4.2 it increases with decreasing temperature.									
it incr	eases wit	h decreasing	temperature 1 formulas.	of the order	of 10 ⁻¹⁹ or thank	ω^2 cm ⁻¹ :	for Im ³⁺	at 4.2 for		
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POLYAKOVA, A.I.; FAKHRUTDINOVA, L.I.; MINEYEVA, S.I.; AL'PIDOVSKAYA, V.G.

Operation of a unit for the drying of reduced gas in the Minnibayevo gasoline plant. Nefteper. i reftekhim. no.5:14-17:64. (MIRA 17:8)

1. Tatarskiy neftyanoy nauchno-issledovatel skiy institut,

g. Bugul¹ma.

BAZHENOV, Vladimir Ivanovich; KOBYLYANSKIY, D.A., retsenzent; RYZHNIKOVA, A.M., retsenzent; BELOKOSKOVA, N.A., retsenzent; MINEYEVA, V.J., retsenzent; POD"YEMSHGHIKOVA, K.K., retsenzent; GABOVA, D.M., red.

[Study of materials used in the clothing industry] Materialovedenie shveinogo proizvodstva. Moskva, Legkaia industriia, 1964. 374 p. (MIRA 18:4)

BELOV, V.P.; MINGALEV, B.S.; SHEKHTER, V.M.

Possibility of determining form factors in the leptonic decay of hyperons. Zhur.eksp.i teor.fiz. 38 no.2:541-552 F '60.

(MIRA 14:5)

1. Leningradskiy fiziko-teknicheskiy institut Akademii nauk SSSR. (Mesons---Decay)

MINGALEY, M.

Radar, Washi vesti no.61:3 Ag 154. (MIRA 8:1) (Radar)

MINGALLY H.

Radar (continuation). Nashi vesti no.74:3 Mr 155. (MLRA 8:3) (Radar)

MINGALEY, V.

Food service enterprises are short of equipment. Obshchestv.pit. no.5:30-31 My 460. (MIRA 13:10)

1. Zamestitel ministra torgovli Bashkirskoy ASSR.

(Bashkiria--Restaurants, lunchrooms, etc.--Equipment and supplies)

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VASIL'YEV, Mikhail Vladimirovich; MINGAIRY, Yu.A., redaktor; MAMOT, A.I., redaktor; LUCHKO, Yu.V., redaktor izdatel'stva; ZEF, Ye.M., tekhnicheskiy redaktor

[Automobile and tractor transportation in open-cut mining]
Avtomobil'nyi i traktornyi transport na kar'erakh. Sverdlovsk.
Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii.
Sverdlovskoe otd-nie, 1957. 432 p. (MIRA 10:11)
(Mine haulage) (Motor trucks)

MINGALEV, Yu.A.; ULEZIO, Yu.S.; ZININ, V.S.

Remote control of scraper winches. Trudy Unipromedi no.2:163-173
'57. (MINA 11:11)

(Mining machinery) (Winches) (Remote control)

MINGALEV, YU. A.

127-58-5-27/30

AUTHORS:

Kulakov, I.K., Mining Engineer (Sibgiprozoloto); Latskiy, V.I., and Mingalev, Yu.A., Mining Engineers (Unipromed')

TITLE:

Apropos of the Article by A.I. Golomolzin, T.V. Kapitanov et al "To Reduce Unnecessary Quantities of Capital Mine Workings" (Na stat'yu A.I. Golomolzina, T.V. Kapitanova i drugikh "Sokratit' izlishniye ob'yëmy kapital'nykh gornykh vyrabotok")

PERIODICAL:

Gornyy Zhurnal, 1958, Nr 5, pp 78-79 (USSR)

ABSTRACT:

This is a review of two comments on the above-mentioned article which was published in Gornyy Zhurnal, Nr 6, for 1957.

AVAILABLE:

Library of Congress

Card 1/1

1. Mines-Operation

MINGALEV, Yu.A.; VERETENNIKOV, V.F.; KORLYAKOV, P.A.; KOLDOMOV, A.S.

The PI-1 conveyor-loader. Biul.tekh.-ekon.inform.Gos.nauch.-issl. inst.nauch.i tekh.inform. no.9:13-14 '63. (MTRA 16:10)

ASHIKHMIN, D.A., inzh.; VERETENNIKOV, V.F., inzh.; GLAZYRIN, I.A., inzh.; D'YAKOV, A.G., inzh.; MINGALEV, Yu.A., inzh.

Scraper conveyor with a bottom carrying arm for hauling hard, large-size ore. Gor.zhur. no.1C:54-55 0 164.

1. Nauchno-issledovatel skiy i proyektno-konstruktorskiy institut gornogo i obogatitel nogo mashinostroyeniya, Sverdlovsk.

ASHIKHMIN, D.A., inzh.; MINGALEV, Yu.A., inzh.

Industrial testing of a bottom loading belt scraper conveyor. Izv.vys.ucheb.zav.; gor.zhur. 8 no.11:105-109 165.

(MIRA 19:1)

1. Nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut gornogo i obogatitel'nogo oborudovaniya. Rekomendovana kafedroy rudnichnogo transporta Sverdlovskogo gornogo instituta. Submitted April 14, 1965.

PETPOV. A.A.; PORFIR YEVA, Yu.I.; YAKOVLEVA, T.V.; MINGALEVA, K.S.

Conjugated systems. Part 42: Order of addition of iodine to vinyl acetylene hydrocarbons. Zhur.ob.khim. 28 no.9:2320-2324 S 58.

(MIRA 11:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

(Iodine) (Acetylene)

SOT/20-123-2-25/50

5(> 1 AUTHC S: Petrov, A. A., Mingaleya, K. S., Kupin, B. S.

TITLE:

Dipolar Moments and Reactivity of the Vinyl Acetylene Hydrocarbons (Dipol'nyye momenty i reaktsionnaya sposobnost

vinilatsetilenovykh uglevodorodov)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 2, pp 298-300

ABSTRACT:

The investigation of the addition reactions of the 1,3-eninhydrocarbons lead to the conclusion that in the molecules of (USSR) the vinyl acetylene and n-alkyl acetylenes (II) the electron cloud is displaced in the direction of the triple bond (Ref 1). However, in the case of the vinyl aliyl acetylenes (III) and some isoalkenyl acetylenes (IV) a double polarization of their molecules had to be assumed which is increased in the one or the other direction depending on the nature of the addenda: in the interaction with the hydrogen halides the order of addition proved an electron displacement in the direction of the triple bond (Ref 2), however, in reactions with bromine, water and alcohols it was the direction of the double bond (Refs 3,4) This twofold reactivity could have its cause in the weakening

Card 1/4

SOV/20-123-2-25/50 Dipolar Moments and Reactivity of the Vinyl Acetylene Hydrocarbons

of the polarity of the enin system due to a partial electron displacement in one direction which is contrary to the usual displacement in the 1,3-enin system ((III), (IV)). Some physical properties of the vinyl alkyl acetylenes tend to show such a polarization (Scheme). The authors measured the dipolar moments of 7 vinyl allyl acetylenes with the following alkyl groups: CH3-, C2H5-, C3H7-, C4H9-, C5H11, C6H13, and C8H17, as well as the cis- and trans-propenyl acetylenes, the isopropenyl acetylene and the A-tert.butyl-vinyl acetylene, and, for the reason of comparison, also the moment of the phenyl acetylene. The following results were obtained: 1) The dipolar moments of the vinyl methyl and isopropenyl acetylenes are considerably lower than that of vinyl acetylene (0.77 D). Thereby the electron displacement in the opposite direction to the non-substituted vinyl acetylene was experimentally proved. 2) The dipolar moment increases a little with the increase of the carbon radical, but then remains about constant. 3) In the cis- and trans-propenyl acetylenes the electrons are displaced in the same direction as in the non-substituted vinyl acetylene.

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SOV/20-123-2-25/50

Dipolar Moments and Reactivity of the Vinyl Acetylene Hydrocarbons

4) The Bekker-Natan effect can not be directly proved in the molecule of isopropenyl acetylene. Although \$\beta\$-tert butyl-vinyl acetylene has a higher dipolar moment than isopropenyl acetylene this dipolar moment is close to that of vinyl butyl acetylene. Thus, the measurement results of the dipolar moments of vinyl acetylene hydrocarbons proved the concept of the reaction mechanism of the addition in the places of the conjugated triple and double bond, as earlier proposed on the basis of chemical characteristics. There are 2 tables and 10 references, 7 of which are Soviet.

ASSOCIATION:

Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet)

PRESENTED:

July 4, 1958, by B. A. Arbuzov, Academician,

Card 3/4

5(3)

AUTHORS: Petrov, A. A., Mingaleva, K. S.

507/79-29-9-4/76

TITLE:

Dipole Moments and Activity in the Telomerization Reaction With Diene Hydrocarbons of Some Allyl Chlorides

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 2826 - 2829 (USSR)

ABSTRACT:

To clarify the causes underlying the rules described in previous papers (Refs 1-5) as well as certain other rules governing the telomerization of diene hydrocarbons with halogen derivatives, and to determine the dependence of reactivity on their structure, accurate data were needed concerning the physico-chemical properties of the initial halogen derivatives and the telomers obtained from them. For this purpose, the dipole moments of a number of pure hydrochlorides of diene bydrocarbons and their initial products were investigated by the telomerization with them and other dienes. Crotyl chloride and 2-chloropentene-3 probably have a trans-configuration. Telomers are, in most cases, mixtures in which the isomers specified in tables 1 and 2 predominate;

Card 1/2

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Dipole Moments and Activity in the Telomerization Reection SOV/79-29-9-4/76 With Diene Hydrocarbons of Some Allyl Chlorides

> therefore, data concerning telomers were made use of with caution. By confronting the dipole moments of the diene hydrochlorides investigated and of allyl chloride the following conclusions were drawn: 1) Allyl halogen derivatives exhibit somewhat lower dipole moments, as compared to their corresponding saturated analogues (Ref 6). 2) Dipole moments of allyl halogen derivatives grow with increasing number of methyl group on the double bond. 3) To a somewhat weaker degree, the dipole moments act upon the methyl groups at the carbon bound with chlorine. 4) A second chlorine atom at the double bond somewhat increases the moment. These and further investigation results and conclusions showed that the peculiarities in the bahavior of halogen derivatives, in the telomerization with dienes, are not only determined by their dipole moments and the moments of telomers. Thus, there is no direct relation between reaction properties and dipole moments. There are 2 tables, 8 references 7 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Institute of Technology imeni Lensovet)

SUBMITTED:

July 19, 1958

Card 2/2

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2209, 1153, 1321

S/079/60/030/007/032/039/XX B001/B066

AUTHORS:

Petrov, A. A., Mingaleva, K. S., Maretina, I. A., and Nemirovskiy, V. D.

TITLE:

Investigations in the Field of Conjugated Systems. CXXII.

Dipole Moments and Reactivity of Vinyl Acetylene Ketones and Amines

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 7, pp. 2248-2250

TEXT: Following their papers (Refs. 1-4) on the interpretation of rules governing the reactivity of vinyl acetylene hydrocarbons, the authors determined the dipole moments of two vinyl acetylene ketones, (I) and (II), of different structures, and of amine (III). The dipole moment of ketone (I) was found to be much larger than the moments of methyl-vinyl ketone (Ref. 5) and mesityl oxide (Ref. 6). The dipole moment of ketone (II), with moments of the carbonyl group and of the enine system opposite to each other, was lower than in the case of methyl-vinyl ketone. The same ratio also existed between the polarizability of these ketones (Table 2).

Card 1/3

85612

s/079/60/030/007/032/039/XX Systems. CXXII. Dipole Moments and Reactivity B001/B066 Investigations in the Field of Conjugated of Vinyl Acetylene Ketones and Amines HC = C-CH = CH-C=0 Vinyl acetylene amine (III), in the molecule of which a conjugation exists between the electron pair of the nitrogen atom and the enin system, showed between the electron pair of the nitrogen and ungaturated amines with a very large dipole moment. 0=C-C = C-CH=CH2 oetween the electron pair of the nitrogen atom and the enin system, showed a very large dipole moment, whereas saturated and unsaturated amines without such a structure have small moments (Refs. 7, 8, 9) (III) . This agreement between the changes to be expected for the dipole moments under the conjugation effect and those observed in experiments, support the authors; assumption on the electron displacement in 1.3-enin sustana, Vinul acetulana amine (TITT) adda browing observed in experiments, support the authors, assumption on the electron displacement in 1,3-enin systems. Vinyl acetylene amine (III) adds bromine primarily to the triple hord. This corresponds to that electron relationships are the triple hord. HC =C-CH-CH-N(C2H5)2 primarily to the triple bond. This corresponds to that electron polariza. tion which might be assumed from the magnitude of the dipole moment (Pef 12) (Ref. 12). Consequently, a certain dependence exists in some cases between polarity in the steady state and the reactivity of the derivatives of vinyl acetylene hydrocarbons. There are 2 tables and 13 references: 7 Soviet, 1 US, and 5 British.

APPROVED FOR RELEASE: 06/14/2000

card 2/3

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Investigations in the Field of Conjugated S/079/60/030/007/032/039/XX Systems. CXXII. Dipole Moments and Reactivity B001/B066 of Vinyl Acetylene Ketones and Amines

L'eningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet) ASSOCIATION:

SUBMITTED: July 16, 1959

Card 3/3

PETROV, A.A.; MINGALEVA, K.S.; MARETINA, I.A. Investigation in the field of conjugate systems. Report 125:

Trudy LTI no.60:

Trudy LTI no.60:

MIRA 14:6)

1. Kafedra organicheskoy khimii Leningradskogo tekhnologicheskogo instituta imeni Lensoveta. 75-77 .60. (Butadiene--Dipole moments)

CIA-RDP86-00513R001134420002-4" **APPROVED FOR RELEASE: 06/14/2000**

S/019/61/031/011/002/0-5 D228/D305 Petroy, A. A., Mingaleva, K. S., Stadnichuk, M. D., The dipole moments, structure and reaction capacity of and Maretina, T. A. the dipote momenta, some and silicohydrocarbons and silicohydrocarbons Zhurnal obshchey khimit; ", 31, no, 11, 1961, 3521 3524 AUTHORS: The authors compare the dipole moments of four enin hydra-The authors compare the dipole moments of four enin hydrocarbons with tertobutyl and triphenyl radicals arouning in order
hydrogarbons with a triple honded trimethylailyl grouning. carbons with a triple bonded, trimethylarly grouping in order by hydrocarbons with a triple bonded, trimethylarly such substances clarify the difference in the reaction canacity of such substances TITLE ! nyarocarbons...with a triple bonded, trimethylarly grouping...in order p. ... paragraphic of such substances production capacity of such substances clarify the difference in the reaction by A. A. Petrow. K. S. Mingalana glous work in this field has been done by A. A. Petrow. clarity the difference in the cention capacity of such and such and such this field has been done by A. A. petrow, K. S. Mingalawa. and B. S. Kupin (Ref. 4. Dokl. AN SSSR, 123, 298, 1958; Ref. 5. Zh. and B. S. Kupin (Ref. 4. Dokl. AN SSSR) PER IODI CAL 8 vious work in this field has been done by A. A. Petron, K. S. Minga. S. Zh. and B. S. Kupin (Ref. 4. Dokl. AN SSSR, 123. 298; 1958; Experimental obshab. Lhimii 90. 3799. 1050) and other scientists. and B. S. Kupin (Ref. 4. Dokl. AN SSSR, 123, 298, 1958; Ref. 5. Zhone and B. S. Kupin (Ref. 4. Dokl. AN SSSR, 123, 298, 1958; Experimental procession that selection the following wave cincite the following wave cincite the following wave cedure. obsheho khimi; 29; 3732; 1959) and other scientists. Experimental proceeding way: cinyite the following way: cinyite the cedure: but viace tylene and its isoproperal decimation by the method of the cedure and its isoproperal decimation by the method of the cedure. cedure: The hydrocarbons were prepared in the following way: cinyite by the method of I Ac butylacetylene and its isopropenyl derivative by the method of continuitylacetylene and its isopropenyl derivative beautylacetylene and I petrou (Ref. R. 7h. abababab bhimis of Action and A. A. Petrou (Ref. R. 7h. abababab bhimis of Action and A. A. butylacetylene and its isopropenyl derivative by the method of [Ac. 1961]; Maretina and Ac. A. Petrov (Ref. 8. Zh. obehch. khimi: 31. 419; Ac. 1961); Card 1/3 CIA-RDP86-00513R001134420002-4"

APPROVED FOR RELEASE: 06/14/2000

The dipole moments

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entailing the respective alkylation of propenyl tertobutyl magnesion becomedand the degradation of the alcohol, obtained from tertobutylasetyimagn-ium bromide and acetoner triph-nylmathylvinytac-tylen- by reacting triphenylchloromethane with vinylacetylmagnesium bromide. The sil cohydex tarbons were synthesized from trimethyle or triphenyls (lan-balile and wanylacetylmagnesium bromides. The dipole moments were determined by the method of dilute solutions, the dielectric permeability being measured to a special device by the poleation technique. According to G. No. Kartsey and Ya. K. Syckin (Ref. 9 Dokl. AN SSSR, 122, 99, 1958 121 AN SSSR, Ord. Whim naul, 374, 1960), atomic polarization caunal be discogarded in the case of S; compounds so the authors used a same of 5 units per one. Si atom the atomic polarization for eitheobydrocarbons. Conclusions. The data for the hydro arbons show that the ratroduction of methyl and triphenyl radicals at the logg and 4 positions in the viace acetylens and vinylmethylacetylene molecules has various effects on their dipole moments; these are especially pronounced in the case of the former cadical, and the authors consider the phenyl ring to be encirhed by electrons at the expense of the enin systems. The same partierns were its

Gard 2/3

The dipole moments...

8/079/61/031/011/002/015 D228/D305

served in the silicohydrocarbons, although such compounds tend to have smaller dipole moments, which may be due to the displacement of free electron pairs of the halogens or oxygen to the side of the Si atom, whose d-shell is unfilled. However, the orientation of the dipole moment in the molecules of the silicohydrocarbons does not appear to differ from that in the molecules of the corresponding hydrocarbons. There are 2 tables and 9 references: 7 Soviet-bloc and 2 non-Soviet-bloc. The references ences to the English-language publications read as follows: W. H. Carothers, G. J. Berchet, J. Am. Chem. Soc., 55, 1095 (1933); C. Eaborn,

ASSOCIATION:

Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute im. Lensovet)

SUBMITTED:

November 30, 1960

Card 3/3

PETROV, A.A.; MINGALEVA, K.S.; ZAVGORODNIY, V.S.

Chemistry of unsaturated tin hydrocarbons. Part 4: Diple moments of alkyl-, alkenyl-, and phenylacetylenic tin hydrocarbons. Zhur.ob.khim. 34 no.2:533-535 164. (MIRA 17:3)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

PETROV, A. A.; RADCHENKO, S. I.; MINGALEVA, K. S.; SAVICH, I. G.; LEBEDEV, V.B.

Alkyl thioenynes and their analogs. Fart 1: Synthesis and properties of vinylacetylenic thio., seleno., and telluro ethers.

Zhur. ob. Khim. 34 no.6:1899-1905 Je '64. (MIRA 17:7)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

L 17962-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 ASD(a)-5/SSD/AFWL/ESD(t)/RPLWV/JFW/RM

ACCESSION NR: AP5002621

5/0079/64/034/008/2630/2632

AUTHOR: Ionin, B. I.; Mingaleva, K. S.; Petrov, A. A.

TITLE: Dipole moment of phosphinic acid esters with unsaturated radicals

SOURCE: Zhurnal obshchey khimii, v. 34, no. 8, 1964, 2630-2632

TOPIC TAGS: ester, phosphinic acid, chemical bonding, organic phosphorus compound, saturated hydrocarbon, unsaturated hydrocarbon, dipole moment

Abstract: The dipole moment of eight arethyl esters of phosphinic acids with saturated, ethylene, and acetylene radicals: diethyl esters of methylacetyleryl- and phenylacetylenylphosphinic acids and their ethylene and unsaturated analogs, as well as ethyldiacetylenyphosphinic ester, were measured. An assumption of weak conjugation of the diethylphosphone group with multiple bonds was confirmed. It was shown that the diethylphosphone group is somewhat more conjugated with a triple bonds than with a double bond. The dipole moment was found to be directed in all cases toward the diethylphosphone group. Orig. art. has 2 tables.

Card 1/2

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134420002-4

L 17962-65 ACCESSION NR					ad
ASSOCIATION: Technological	Leningradskiy Institute)		y institut im. Le		
SUBMITTED:	27Jun63	encl:	00	SUB CODE:	OU, En
NO REF SOV:	OII	other:	004	JPRŚ	
Card 2/2					

STADNICHUK, M.D.; MINGALEVA, K.S.; PETROV, A.A.

Dipole moments and the structure of k,3-diene silicon hydrocarbons. Zhur. ob. khim. 34 no.10:3289-3291 0 '64. (MIRA 17:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

TEMNIKOVA, T.I.; KARAVAN, V.S.; SEMENOVA, S.N.; ATAVIN, A.S.; MIRSKOVA, A.N.; CHIPANINA, N.N.; PRELOVSKAYA, R.A.; AKIMOVA, G.S.; CHISTOKLETOV, V.N.; PETROV, A.A.; MINGALEVA, K.S.; GOLODOVA, K.G.

Letters to the editors. Zhur. org. khim. 1 no.11:2076-2078 N '65. (MIRA 18:12)

1. Leningradskiy gosudarstvennyy universitet (for Temnikova, Karavan, Semenova). 2. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR (for Atavin, Mirskova, Chipanina, Prelovskaya). 3. Leningradskiy tekhnologicheskiy institut imeni Lensoveta (for Akimova, Chistokletov, Petrov).

ANTHOR: Bogolyubov, G. M.; Mingaleva, K. S.; Petrov, A. A. CRG: Leningrad Technological Institute im. Lensovet (Leningradskiy tekhnologicheski institut) TITLE: Dipole moments of certain acetylenic derivatives of phosphorus SOURCE: Zhurnal obshchey khimii, v. 35, no. 9, 1965, 1566-1570 TOPIC TAGS: dipole moment, intramolecular mechanics, UV spectrum, sulfide, halide organic phosphorus compound, phosphorus ABSTRACT The intramolecular electronic interactions in the molecules of sulfides of tertiary alpha, beta-unsaturated phosphines were studied by determining their dipole moments and ultraviolet spectra. The dipole moments were obtained for the phosphine sulfides, thiophosphroyl halides, and halides of tricoordinated phosphorus and correlated with the Taft inductive constants. The increase in the dipole moments of sulfides of tertiary acetylenic phosphines with increasing sum of the inductive constants of the substituents on the phosphorus atom may be explained by a positive electronic effect, directed identically with the vector of the total moment of the molecule. The dipole moments of halides of tricoordinated phosphorus decrease with increasing electron-attracting ability of the substituents, analogously to the triphosphoryl.	AUTHOR: Bogolyubov, G. M.; Mingaleva, K. S.; Petrov, A. A. ORG: Leningrad Technological Institute im. Lensovet (Leningradskiy tekhnologicheski institut) TITIE: Dipole moments of certain acetylenic derivatives of phosphorus SOURCE: Zhurnal obshchey khimii, v. 35, no. 9, 1965, 1566-1570 TOPIC TAGS: dipole moment, intramolecular mechanics, UV spectrum, sulfide, halide organic phosphorus compound, phosphorus ABSTRACT The intramolecular electronic interactions in the molecules of sulfides of tertiary alpha, beta-unsaturated phosphines were studied by determining their dipole moments and ultraviolet spectra. The dipole moments were obtained for the phosphorus and correlated with the Taft inductive constants. The increase in the dipole moments of sulfides of tertiary acetylenic phosphines with increasing sum of the inductive constants of the substituents on phines with increasing sum of the inductive constants of the substituents on the phosphorus atom may be explained by a positive electronic effect, directed identically with the vector of the total moment of the molecule. The dipole identically with the vector of the total moment of the molecule.	ACC NR.				UR/0079/65/035/009/1566/19
ORG: Leningrad Tachnological Institute im. Lensovet (Leningradskiy tekhnologicheski institut) TITIE: Dipole moments of certain acetylenic derivatives of phosphorus SOURCE: Zhurnal obshchey khimii, v. 35, no. 9, 1965, 1566-1570 TOPIC TAGS: dipole moment, intramolecular mechanics, UV spectrum, sulfide, halide organic phosphorus compound, phosphorus ABSTRACT The intramolecular electronic interactions in the molecules of sulfides of tertiary alpha, beta-unsaturated phosphines were studied by determining their dipole moments and ultraviolet spectra. The dipole moments were obtained for the phosphine sulfides, thiophosphroyl halides, and halides of tricoordinated phosphorus and correlated with the Taft inductive constants. The increase in the dipole moments of sulfides of tertiary acetylenic phosphines with increasing sum of the inductive constants of the substituents on phines with increasing sum of the inductive constants of the substituents on the phosphorus atom may be explained by a positive electronic effect, directed identically with the vector of the total moment of the molecule. The dipole moments of halides of tricoordinated phosphorus decrease with increasing electron-attracting ability of the substituents, analogously to the triphosphoryl	ORG: Leningrad Technological Institute im. Lensovet (Leningradskiy tekhnologichaski institut) TITIE: Dipola moments of certain acetylenic derivatives of phosphorus SOURCE: Zhurnal obshchey khimii, v. 35, no. 9, 1965, 1566-1570 TOPIC TAGS: dipola moment, intramolacular machanics, UV spectrum, sulfide, halide organic phosphorus compound, phosphorus ABSTRACT The intramolacular electronic interactions in the molaculas of sulfides of tertiary alpha, beta-unsaturated phosphines were studied by determining their dipola moments and ultraviolat spectra. The dipola moments were obtained for the phosphine sulfides, thiophosphroyl halides, and halides of tricoordinated phosphorus and correlated with the Taft inductive constants. The increase in the dipola moments of sulfides of tertiary acetylenic phosphines with increasing sum of the inductive constants of the substituents on the phosphorus atom may be explained by a positive electronic effect, directed identically with the vector of the total moment of the molacula. The dipola moments of halides of tricoordinated phosphorus decrease with increasing electron-attracting ability of the substituents, analogously to the triphosphoryl.	AUTHOR:	Bogolyubov, G. M.; M	lingalova, K. S	.; Petrov, A.	A.
SOURCE: Zhurnal obshchey khimii, v. 35, no. 9, 1965, 1566-1570 TOPIC TAGS: dipole moment, intramolecular mechanics, UV spectrum, sulfide, halide organic phosphorus compound, phosphorus ABSTRACT The intramolecular electronic interactions in the molecules of sulfides of tertiary alpha, beta-unsaturated phosphines were studied by determining their dipole moments and ultraviolet spectra. The dipole moments were obtained for the phosphine sulfides, thiophosphroyl halides, and halides of tricoordinated phosphorus and correlated with the Taft inductive constants. The increase in the dipole moments of sulfides of tertiary acetylenic phosphines with increasing sum of the inductive constants of the substituents on the phosphorus atom may be explained by a positive electronic effect, directed identically with the vector of the total moment of the molecule. The dipole moments of halides of tricoordinated phosphorus decrease with increasing electron-attracting ability of the substituents, analogously to the triphosphoryl	SOURCE: Zhurnal obshchey khimii, v. 35, no. 9, 1965, 1566-1570 TOPIC TAGS: dipole moment, intramolecular mechanics, UV spectrum, sulfide, halide organic phosphorus compound, phosphorus ABSTRACT The intramolecular electronic interactions in the molecules of sulfides of tertiary alpha, beta-unsaturated phosphines were studied by determining their dipole moments and ultraviolet spectra. The dipole moments were obtained for the phosphine sulfides, thiophosphroyl halides, and halides of tricoordinated phosphorus and correlated with the Taft inductive constants. The increase in the dipole moments of sulfides of tertiary acetylenic phosphines with increasing sum of the inductive constants of the substituents on phines with increasing sum of the inductive electronic effect, directed identically with the vector of the total moment of the molecule. The dipole moments of halides of tricoordinated phosphorus decrease with increasing electron-attracting ability of the substituents, analogously to the triphosphoryl	ORG: Len	ingrad Tachnological	Institute im.	Lensovet (Ler	dngradskiy tekhnologicheski
TOPIC TAGS: dipole moment, intramolecular mechanics, UV spectrum, sulfide, halide organic phosphorus compound, phosphorus ABSTRACT The intramolecular electronic interactions in the molecules of sulfides of tertiary alpha, beta-unsaturated phosphines were studied by determining their dipole moments and ultraviolet spectra. The dipole moments were obtained for the phosphine sulfides, thiophosphroyl halides, and halides of tricoordinated phosphorus and correlated with the Taft inductive constants. The increase in the dipole moments of sulfides of tertiary acetylenic phosphines with increasing sum of the inductive constants of the substituents on the phosphorus atom may be explained by a positive electronic effect, directed identically with the vector of the total moment of the molecule. The dipole moments of halides of tricoordinated phosphorus decrease with increasing electron-attracting ability of the substituents, analogously to the triphosphoryl	TOPIC TAGS: dipole moment, intramolecular mechanics, UV spectrum, sulfide, halide organic phosphorus compound, phosphorus ABSTRACT The intramolecular electronic interactions in the molecules of sulfides of tertiary alpha, beta-unsaturated phosphines were studied by determining their dipole moments and ultraviolet spectra. The dipole moments were obtained for the phosphine sulfides, thiophosphroyl halides, and halides of tricoordinated phosphorus and correlated with the Taft inductive constants. The increase in the dipole moments of sulfides of tertiary acetylenic phosphines with increasing sum of the inductive constants of the substituents on the phosphorus atom may be explained by a positive electronic effect, directed identically with the vector of the total moment of the molecule. The dipole moments of halides of tricoordinated phosphorus decrease with increasing electron-attracting ability of the substituents, analogously to the triphosphoryl	TITIE: D	ipole moments of cer	tain acetylen	lo derivatives	of phosphorus
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	Cord 1/2 UDC: 547.341+537.226.1	sulfides mining t obtained tricoord The incr phines w the phos identics	of tertiary alpha, oneir dipole moments for the phosphine sinated phosphorus and ease in the dipole mith increasing sum of the phorus atom may be easy with the vector	and ultraviole ulfides, thior d correlated woments of suling the inductive explained by a of the total managements.	et spectra. In the spectra in the tast sides of terting constants of positive electronement of the phorus decreases, analogous.	the dipole moments were ides, and halides of inductive constants. ary acetylenic phoses for the substituents on atronic effect, directed molecule. The dipole with increasing electronic the triphosphoryl

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EWT(m)/EWP(j) IJP(c) SOURCE CODE: UR/0079/65/035/010/1720/1723 ACC NR: AP5025123 79 AUTHOR: Petrov, A. A.; Maretina, I. A.; Mingaleva, K. S. B ORG: Leningrad Technological Institute imeni Lensovet (Leningradskiy tekhnologi cheskiy institut)

JW/RM

TITLE: Silicon-containing acetylene enamines

Zhurnal obshchey khimii, v. 35, no. 10, 1965, 1720-1723 SOURCE: magnetic resonance,

TOPIC TAGS: silicon compound, silane, electron density, secondary amine, C ≡ CH type made it possible to hypothesize the strong displacement of the electron cloud in their molecules to the side of the triple bond. These compo unds have a considerably higher dipole moment than the saturated amines; the nitrogen atom does not seem inclined to hydrogen bond formation; and the magnetic meanance; signal of the acetylene proton indicates strong shielding. The purpose of the work was to determine how the electron density distribution is changed in a system during introduction into the chain of a silicon atom capable of d, 77-reaction

Card 1/2

WDC: 547.333.3:547.345

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ACC NR: AP5025123

with \mathcal{N} -electrons of multiple bonds. By the action of trialkylchlorsilanes on the Iotsich complexes/obtained from the single amines of $HC \subseteq C-CH-CH-NR_2$, two silicon containing acetylene enamines of $R_3Si-C \subseteq C-CH-CH-NR_2$ type were synthesized, where $R=CH_3$ and C_2H_5 . The dipole moments of the silicon-containing acetylene amines are greater than those of the original 1, 3-single amines by 0.4-0.8D. This fact is interpreted as the result of a d-orbit participation of the silicon atom in the conjugation. Orig. art. has: 2 fig.

SUB CODE: 07,20/ SUBM DATE: 090ct64/ ORIG REF: 006

Card 2/2 pla

GRUDTSINA, A.I., dots; MINGAZETDINOV, A.A., vrach

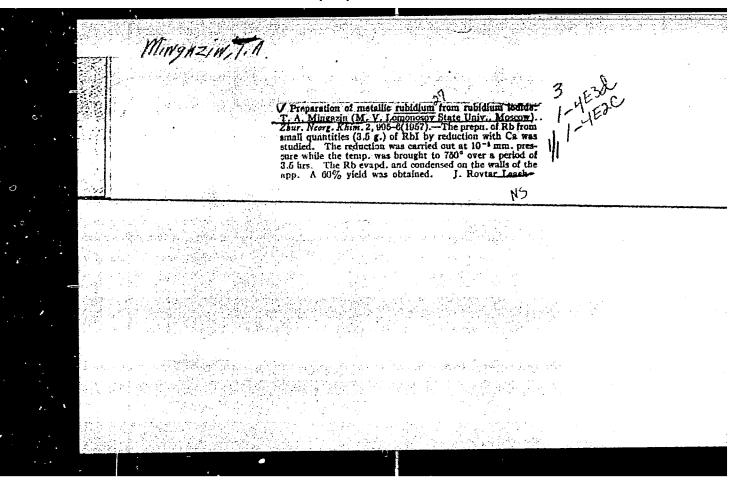
Problems in labor hygiene in the preparations of radon baths.

Gig. i san. 25 no. 6:59-62 Je *60. (MIRA 14:2)

1. Iz Bashkirskogo meditsinskogo instituta i Bashkirskoy respublikanskoy sanitarno-epidemiologicheskoy stantsii.

(RADON-THERAPENTIC USE) (RADIATION PROTECTION)

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134420002-4



SOV /137-58-12-25091

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 151 (USSR)

AUTHOR: Mingazin, T. A.

TITLE: Investigation of the Bismuth-rubidium System (Issledovaniye sistemy

vismut-rubidiy).

PERIODICAL: Turkm. univ., Uch. zap. Turkm un-t, 1957, Nr 11, pp 231-239

ABSTRACT: The investigation of alloys of the Bi-Rb system was carried out by means of a special apparatus which permits one to weigh micro-

specimens of a special apparatus which permits one to weigh microspecimens of Rb, prepare alloys, obtain thermographic curves, take test samples for X-ray analysis, and measure the density of small amounts of alloys under hermetically sealed conditions. On the Bi side the eutectic occurs with 4.5% Rb at 250°C; the second phase of this eutectic is a Bi₂Rb compound with a melting point 650°, a density of 7.5 g/cc, and cubic lattice. On the Rb side there is a

eutectic with a melting point close to that of Rb.

L.V.

Card 1/1

SOV /137-58-12-25092

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 151 (USSR)

AUTHOR: Mingazin, T. A.

TITLE: On the Investigation of the Bi-Rb System (K issledovaniyu sistemy

vismut-rubidiy)

PERIODICAL: Izv. AN TurkmSSR, 1958, Nr 1, pp 91-93

ABSTRACT: Ref. RzhMet. 1958, Nr 12, abstract 25091

Card 1/1

AUTHOR:

Mingazin, T. A.

78-3-3-39/47

TITLE:

Discussion on Lectures (Obsuzhdeniye dokladov)

PERIODICAL:

Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 3,

pp. 776-776 (USSR)

ABUTRACT:

T.A. Mingazin discusses the lectures by M.M. Zhuravlev and R.N. Kuz'min. They dealt with one of the stages of the complex investigation of the physico-chemical and crystallo-chemical properties of bismuth alloys with the elements of the periodic system according to their position in the table by D.I. Mendeleyev. The transition of most of them to a superconducting state is an outstanding property of these alloys. Thus there is a superconducting compound for every kind of metal in bismuth alloys with alkaline metals. There are no other references on alloys of bismuth with rubidium than those by N.Ye. Alekseyevskiy. For this reason the lecturer had carried out thermographic, metallographic and partly also radiographic analyses of this system. A special method for the production of bismuth-rubidium alloys excluding the oxidation of the latter was worked out in view of the strong chemical

Card 1/2

Discussion on Lectures

78-3-3-39/47

activity of rubidium and of its small quantities. According to the values of thermic and metallographic analyses there is a certain compound in the Bi-Rb system which has a melting point at about 650°. This compound approaches Bi4Rb. A complete x-ray structural analysis did not succeed. There are, however, also lines of the second phase with a cubic lattice besides the bismuth lines on the Debye crystallogram. Two parts of the phase diagram Bi - Rb were investigated: from the side of bismuth and from the side of rubidium. The middle part of the diagram was not investigated. The phase diagram Bi - Rb has no doubt a complicated look. Of late the compound Bi2Rb was discovered radiographically in the fusion of bismuth with rubidium containing an admixture of potassium. At present the central part of the phase diagram Bi - Rb is investigated thermographically and metallographically, and the compounds found in the system are investigated by means of x-ray structural analysis.

ASSOCIATION:

Turkmenskiy gosudarstvennyy universitet, Ashkhabad (Ashkhabad, Turkmen State University)

Card 2/2

56-34-4-5/60

AUTHORS:

Zhuravlev, N. N., Mingazin, T. A., Zhdanov, G. S.

TITLE:

The Structure of Superconductors. XII (Struktura sverkhprovod nikov. XII) The Investigation of Bismuth - Rubidium Alloys

(Issledovaniye splavov vismuta s rubidiyem)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958,

Vol. 34, Nr 4, pp. 820 - 826 (USSR)

ABSTRACT:

According to thermal, microscopical, and radiographic data the test diagram (probnaya diagramma) of the fusibility of the system Bi-Rb is constructed. The investigation of this system is connected with the solution of various methodical problems. The main difficulties mainly are connected with the high chemical activity of metallic rubidium and also with the great difference of the physical-chemical properties of bismuth and rubidium. The whole investigation was performed at small quantities (~ 3g) of rubidium which required the working out of micromethods for the production of the alloys and their physical-chemical analysis. First the production

Card 1/4

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The Structure of Superconductors. XII. The Investigation of Bismuth-Rubidium Alloys

of the alloys is discussed, the apparatus used for this are discussed by means of figures. The melting was performed in small resistance furnaces. Then the authors report on the the mal analysis of the alloys. The curves of heating and cooling were taken by an automatic electron potentiometer unto a temperature of 50 - 100°C. The results of the thermal analysis obtained are illustrated in a diagram and subsequently discussed. At the bismuth-rich alloys (to the composition Bi₂Rb) also a metallographical investigation was performed. According to this the number of the crystals of the compound Bi₂Rb increases with increasing rubidium content in the alloy. The alloy with 15,8 per cent by weight rubidium according to its composition resembles the compound Bi₂Rb (17 per cent by weight;) it contains a small quantity of eutetic and is almost

homogeneous. In the system Bi-Rb the various phases differ by their color. Then the authors report on the determination

of the structure of the superconductive compound BigRb. By

Card 2/4

The Structure of Superconductors. XII. The Investi- 56-34-4-5/60 gation of Bismuth-Rubidium Alloys

exact determination of the lattice period of BigRb the value a = 9,590 + 0,002 kX was obtained. The distances between the lattice planes, computed from these data agree well with the measured results. The Rb atoms in the structure of the BioRb are distributed according to the diamond law. Some conclusions are: In the system bismuth-rubidium 4 compounds were stated: Bi2Rb, BiRb2, and two compounds of the probable composition Bi2Rb3 and BiRb2. The maxima in the fusibility diagram correspond to the compounds Bi2Rb and BiRb3. These compounds form in the fusion of the components with high heat emission. The two other compounds form according to the peritectic reaction. The superconductive compound BiaRb crystallizes in isometric syngony with $a = 9,590 \pm 0,002^{\circ} kX$ and has a structure of the type of CuoMg. The increase of the minimum interatomic distances in the Bi_Rb leads to an increase of the temperature of the transition into the superconductive state. Finally the author

Card 3/4

The Structure of Superconductors. XII. The Investi- 56-34-4-5/60 gation of Bismuth-Rubidium Alloys

thanks Professor N. Ye. Alekseyevskiy for his valuable advice in the performance of this work, and R. N. Kuz'min for his assistance in the performance of the experiments.— There are 6 figures and 10 references, 9 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: November 15, 1957

1. Bismuth alloys--Analysis 2. Superconductors--Structural analysis

Card 4/4

MINCAZIN, T.A., Cond Phys-math Sci — (diss) "Phermographic, microscopic, and A-ray study of the bismuth- rubidium system." Achkhabad, 1959. 11 pp with diagrams (Ein of Higher Education USSR. Nos Order of Lenin and Order of Labor Red Banner State U im M.V. Lomonosov). 150 copies. Bibliography: p. 11 (10 titles) (KI, 38-59,114)

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AUTHORS:

Zhuravlev, N. N., Smirnov, V. A., Mingazin, T. A.

TITLE:

X-Ray Investigation of Compounds Rb3Bi and Rb3Sb

(Brief Communication)

PERIODICAL:

Kristallografiya. 1960, Vol 5, Nr 1, pp 134-137 (USSR)

ABSTRACT:

RbBi2, a superconductor, has been known to form cubic crystals with a = 9.609 A and bond lengths Bi-to-Bi 3.40 Rb-to-Bi 3.98 A; Rb-to-Rb 4.16 A. Semiconductors Rb3Bi and Rb3Sb were produced by melting the mixtures of the respective metals. The obtained products were pure Rb3E and a mixture of Rb₃Sb crystals with those of RbSb. are dark-gray, brittle, and chemically more active than metallic Rb. The X-ray data proved the hexagonal symmet of Rb Bi, whose identity periods were a = 6.42 ± 0.02 A and c³= 11.46 ± 0.05 A; Rb Sb proved also to be hexagon

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X-Ray Investigation of Compounds Rb₃B1 and Rb₃Sb (Brief Communication)

78111 sov/70-5-1-20/30

with $a = 6.29 \pm 0.02A$ and $c = 11.17 \pm 0.05 A$. Both compounds are isomorph with K3Bi; their space group is C $6_{3}/\text{mmc}$; 2 mole. wt and 8 atoms per unit cell; density is The bond lengths 3.76 for Rb_3Bi and 3.27 for Rb_3Sb . are: Bi-to-Bi 6.42 A; Bi-to-Rb 3.71A; Rb-to-Rb 3.85 (in Rb₃Bi) and 3.73 A (in Rb₃Sb); Sb-to-Sb 6.29 A; Sb-to-Rb 3.85 (in Rb₃Bi) and 3.73 Å (in Rb₃Sb); Sb-to-Sb 6.29A; Sb-to-Rb 3.46 A. Rb atoms form close-packed sheets with Bi or Sb atoms in triangular spaces within the sheet and in body centers of triangular prisms having Rb atoms of adjacent sheets at the vertices and pinacoid centers. A comparison reveals an increase of Bi-to-Bi bond from 3.40 Å in $RbBi_2$ to 6.42 Å in Rb_3Bi , and decrease of Bi-to-Rb and Rb-to-Rb bonds. These changes are believed to be responsible for the turn of a superconductor to a semiconductor. There are 2 tables; and 7 Soviet references.

Card 2/3

X-Ray Investigation of Compounds ${\rm Rb}_3{\rm Bi}$ and ${\rm Rb}_3{\rm Sb}$ (Brief Communication)

78111

SOV/70-5-1-20/30

ASSOCIATION:

Moscow State University imeni M. V. Lomonosov (Mos-

kovskiy gosudarstvennyy universitet imeni M. V. Lomonosova)

SUBMITTED:

September 24, 1959

Card 3/3

IJP(c) EWT(m)/EWP(t)/ETI L 36400-66 SOURCE CODE: UR/0070/66/011/003/0471/0472 AP6018779 ACC NR: 64 AUTHOR: Vergunas, F. I.; Mingazin, T. A.; Smirnova, Ye. M.; Abdiyev, S. 1 ORG: none TITLE: Texture and electrical conductivity of cadmium sulfide sheets SOURCE: Kristallografiya, v. 11, no. 3, 1966, 471-472 TOPIC TAGS: cadmium sulfide, electric conductivity, crystal orientation, temperature dependence, photosensitivity ABSTRACT: The effect of substrate temperatures on structure formation in photosensitive CdS films was studied and correlations between electrical conductivity and the degree of crystal orientation were obtained. Samples were obtained by vacuum sublimation (2.10⁻⁵ mm Hg) where the substrate temperature (T_p) varied from 75 to 400°C. Cu was added to increase the photosensitivity by treating the surfaces with a Cd-CuCl powder and annealing for one hour in Ar. Indium electrodes were evaporated into the surfaces to measure the electrical conductivity. The structure and grain orientation of the films were determined by x-rays and by a photomethod. All of the films had a grain size of about 10 5 cm and were composed of α-modified CdS. In the temperature interval of 150-400°C, the crystals had their σ axis oriented perpendicular to the plane of the substrate. The activation treatment (Cu addition) resulted in coarser crystals (2 to UDC: 548.0 : 537.311 **Card** 1/2

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 $5~\mu$) and in a decrease in the orientation for all values of T_p except for 250°C, where the orientation rose sharply. The electrical parameters measured the concentration of current carriers for both dark and light conductivity. In all cases, the greater the orientation the greater was the conductivity, indicating an anisotropic conductivity mechanism; the conductivity was much greater perpendicular to the c axis than parallel to it. Along the c axis the barrier potential for current carriers was high, but decreased with exposure to light. The barrier distance was estimated to be below 10^{-5} cm, indicating that the barriers were acting within grains. Orig. art. has: 1 figure.

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